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(54) **METHODS FOR REMOVING CYTOKINES FROM BLOOD WITH SURFACE IMMOBILIZED POLYSACCHARIDES**

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See application file for complete search history.

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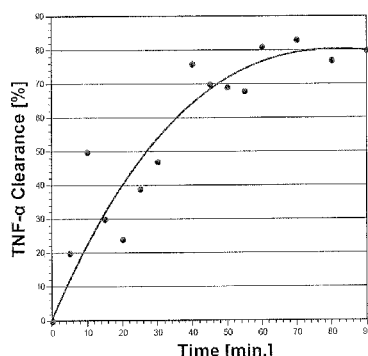
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(57) **ABSTRACT**

The present invention is directed to a method for removing cytokines and/or pathogens from blood or blood serum (blood) by contacting the blood with a solid, essentially non microporous substrate which has been surface treated with heparin, heparan sulfate and/or other molecules or chemical groups (the adsorbent media or media) having a binding affinity for the cytokine or pathogen(s) to be removed (the adsorbates), and wherein the size of the interstitial channels within said media is balanced with the amount of media surface area and the surface concentration of binding sites on the media in order to provide adequate adsorptive capacity while also allowing relatively high flow rates of blood through the adsorbent media.

31 Claims, 2 Drawing Sheets



Removal of TNF-α from 5 L of Platelet Poor Plasma